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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,724	08/05/2003	Kiichiro Nishina	241187US2	5701

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT PAPER NUMBER

2873

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,724

Applicant(s)

NISHINA, KIICHIRO

Examiner

Jordan M. Schwartz

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/30/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

In the Information Disclosure Statement received October 30, 2003, applicant listed "related applications" but has not complied with the requirements of MPEP 1.98 and therefore these listed applications have not been considered. Specifically, applicant is required to provide copies of any cited U.S. applications for consideration in compliance with 1.98(a)(2)(iii).

Claim Rejections - 35 USC § 112

Claims 1-16, 18-19, 21, 23, 24 (and dependent claims 17, 20, 22, 25-28) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1, 19, 21, 23 and 24, applicant is claiming an aperture stop disposed between the "second and third lens group" but has not claimed these lens groups in order from the object side and therefore it is not clear if a specific order of the lens groups was intended as a limitation or if applicant is using the terms "second" and "third" merely to differentiate between different lens groups. The lack of clarity renders the claims vague and indefinite. For purposes of examination the assumed meaning is "an aperture stop between

Art Unit: 2873

the second and third lens groups in order from the object side” and further clarity is required.

In reference to claims 2, 12 and 15, applicant is claiming “averages $n+$ and $n-$ of positive and negative lenses” and “averages $v+$ and $v-$ of positive and negative lenses” and it is not clear if applicant means the averages of all positive and all negative lenses within the lens system (the assumed meaning) or if some other meaning is intended and the lack of clarity renders the claims vague and indefinite.

With respect to claims 3-11, 13-14, 16, and 18, applicant is claiming “the first lens”, “the second lens”, “the third lens”, “the fourth lens” and “the fifth lens” but has not claimed these lenses in order from the object side and therefore it is not clear if a specific order of the lenses was intended as a limitation or if applicant is using these terms merely to differentiate between different lenses. The lack of clarity renders the claims vague and indefinite.

With respect to claim 19, applicant is claiming “disposing the original on a contact glass in plane” and it is not clear as to the intended limitation of “in plane” rendering the claim vague and indefinite.

Claim Objections

Claims 2-3, 11-13, 15, 17 are objected to because of the following informalities:

1. Claims 2, 12, and 15 need to end in a period;

Art Unit: 2873

2. With respect to claim 3, 11, 13, "wherein said original reading lens" should be corrected to "wherein said lens for reading an original";
3. Claim 13 has two period within it which requires correction; and
4. Claim 17, line 2, the spelling of "aspherical" needs to be corrected.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu patent number 5,636,067.

Shimizu reads on these claims by disclosing the limitations therein including the following: a lens system comprising five lenses as a whole including two positive and two negative lenses (Figures 1 and 4, corresponding examples 1-3 and 6); an aspherical surface provided on at least one surface of said five lenses (examples 1-3 and 6); four lens groups of five lenses including a cemented lens of a positive and negative lens (Figures 1 and 4, corresponding examples 1-3 and 6); an aperture stop between the second and third lens groups in order from the object side (Figures 1 and 4); the cemented lens disposed

Art Unit: 2873

adjacent to the aperture stop (Figures 1 and 4). That part of the claim stating, "for reading an original" is set forth in the preamble and has not been given patentable weight. Furthermore, stating "for reading an original" goes to the intended use of the lens system. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Shimizu further discloses satisfaction of the three conditions of claim 2 (examples 1-3 and 6); the claimed specific structure of claim 3 (Figures 1 and 4). With respect to claims 4 and 5, since applicant is not claiming the third and fourth lenses in order from the object side then either lens of the third lens group of Shimizu can be considered the "third lens" and either lens can be considered as the "fourth lens". Shimizu further discloses a lens within the first lens group i.e. the claimed "first lens" having an aspherical surface (example 1); and satisfaction of the conditions of claim 12 (examples 1-3 and 6).

Claims 1-5, 7 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hozumi patent number 6,111,703.

Hozumi reads on these claims by disclosing the limitations therein including the following: a lens system comprising five lenses as a whole including two positive and two negative lenses (Figures 1-11, corresponding embodiments 1-11); an aspherical surface provided on at least one surface of said five lenses (embodiments 1-11); four lens groups of five lenses including a cemented lens of a positive and negative lens (Figures 1-11, corresponding embodiments 1-11);

Art Unit: 2873

an aperture stop between the second and third lens groups in order from the object side (Figures 1-11 and embodiments 1-11); the cemented lens disposed adjacent to the aperture stop (Figures 1-11). That part of the claim stating, "for reading an original" is set forth in the preamble and has not been given patentable weight. Furthermore, stating "for reading an original" goes to the intended use of the lens system. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Hozumi further discloses satisfaction of the three conditions of claim 2 (embodiments 1-11); the claimed specific structure of claim 3 (Figures 1-11). With respect to claims 4 and 5, since applicant is not claiming the third and fourth lenses in order from the object side then either lens of the third lens group of Hozumi can be considered the "third lens" and either lens can be considered as the "fourth lens". Hozumi further discloses the fifth lens as a negative lens (Figures 1-11); and satisfaction of the conditions of claim 12 (embodiments 1-11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2873

Claims 1-2, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda patent number 5,731,915 in view of Huang patent number 6,490,102.

Noda discloses the limitations therein including the following: a lens for reading an original (column 1, lines 11-28 and line 58); comprising five lenses as a whole including two positive and two negative lenses (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20); four lens groups of five lenses including a cemented lens of a positive and negative lens (Figure 1); an aperture stop between the second and third lens groups in order from the object side (Figure 1); the cemented lens disposed adjacent to the aperture stop (Figures 1). Noda further discloses satisfaction of the three conditions of claim 2 (Table 1); the claimed specific structure of claim 13 (Figure 1, Tables 1-7); and satisfaction of the conditions of claim 15 (Tables 1-7). Noda discloses as is set forth above but does not specifically disclose the lens system comprising an aspherical surface. Huang teaches that in an optical system designed for use in an image reading device (abstract) that it is desirable to include an aspherical surface within the lens system to provide improved aberration correction (column 1, lines 33-37). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the reading lens system of Noda as further including an aspherical surface since Huang teaches that in an optical system designed for use in an image reading device that it is desirable to include an aspherical surface within the lens system to provide improved aberration correction.

Art Unit: 2873

Claims 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda patent number 5,731,915 in view of Huang patent number 6,490,102 and further in view of Kikuchi et al patent number 6,163,414.

In reference to these claims, Noda and Huang disclose and teach as is set forth above but do not specifically disclose the image reading specifics as set forth in claims 19-28. Kikuchi et al teaches that in an image reading apparatus it is desirable to have the specifics of the image reading including the original on a contact glass, illuminating the original in a slit like shape, imaging by reducing a reflected light on a line sensor as well as the other image reading specifics as set forth in claims 19-28 (see Kikuchi et al, Figures 1, 3A, 3B, column 7, line 9 to column 11, line 63) for the purpose of providing high resolution image reading (column 1, lines 8-17). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the reading lens of Noda as modified by Huang further comprising the image reading specifics as set forth in claims 19-28 since Kikuchi et al teaches that in an image reading apparatus it is desirable to have the specifics of the image reading including the original on a contact glass, illuminating the original in a slit like shape, imaging by reducing a reflected light on a line sensor as well as the other image reading specifics as set forth in claims 19-28 for the purpose of providing high resolution image reading.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu or Hozumi.

Art Unit: 2873

Shimizu and Hozumi disclose as is set forth above and each further discloses all of the lenses formed of glass (Shimizu, examples 1-3, 6 and column 5, line 30, Hozumi, Tables 1-11) but do not specifically disclose the aspherical surface formed by a glass mold. The examiner takes Judicial Notice that it is well known in the art of lenses to form lenses, including aspherical lenses, by glass molding for the purpose of providing the means of producing the aspherical lens. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the aspherical lens of either Shimizu or Hozumi as formed by a glass mold since it is well known in the art of lenses to form lenses, including aspherical lenses, by glass molding for the purpose of providing the means of producing the aspherical lens.

Allowable Subject Matter

Claims 14 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with reference to claims 14 and 16, none of the prior art either alone or in combination, disclose or teach of the claimed lens system for reading an original specifically including, as the distinguishing feature in combination with the other

Art Unit: 2873

limitations, the claimed specific structure as set forth in claim 13 and at least one surface of the fourth lens as an aspherical surface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jordan M. Schwartz
Primary Examiner
Art Unit 2873
March 3, 2004